

Ser. No. 10/733,533

## Amendments to the Claims

1. (Withdrawn) An apparatus for providing detonative cleaning communication through a vessel wall comprising:
  - a first conduit extending from the vessel wall;
  - a first valve having an open condition permitting communication through the first conduit and a closed condition; and
  - a second conduit having an insertion portion dimensioned to be received within a receiving portion of the first conduit; and
  - a second valve having an open condition permitting communication through the second conduit and a closed condition.
2. (Withdrawn) The apparatus of claim 1 wherein:
  - the first valve is a sliding gate valve; and
  - the second valve is a sliding gate valve.
3. (Withdrawn) The apparatus of claim 1 wherein:
  - one of the first and second valves is a sliding gate valve; and
  - the other of said first and second valves is a hinged gate valve.
4. (Canceled)
5. (Withdrawn) The apparatus of claim 1 further comprising:
  - means for sealing the first conduit relative to the second conduit over a first range of insertion of the second conduit within the first conduit.
6. (Withdrawn) The apparatus of claim 1 wherein:
  - the second conduit has an interior surface off-axis to an exterior surface.
7. (Withdrawn) An apparatus for providing detonative cleaning communication through a vessel wall comprising:

Ser. No. 10/733,533

a conduit defining a flow path through the vessel wall; and  
a valve along the flow path and having an open condition and a closed condition.

8. (Canceled)
9. (Withdrawn) The apparatus of claim 7 wherein:  
the valve is secured relative to the wall;  
the valve is along a downstream half of the flow path.
10. (Canceled)
11. (Canceled)
12. (Original) A method for cleaning a vessel, the vessel having a wall and an access conduit initially sealed by a first valve, the method comprising:  
inserting an insertion portion of a combustion conduit into the access conduit, the combustion conduit having a second valve;  
forming a seal between the access conduit and the combustion conduit;  
opening the first valve;  
opening the second valve;  
passing combustion gasses through the combustion conduit into the vessel; and  
withdrawing the insertion portion from the access conduit.
13. (Original) The method of claim 12 wherein:  
the opening of the first valve occurs during an intermediate stage of said insertion.
14. (Original) The method of claim 12 further comprising:  
forming a seal between the combustion conduit and the access conduit.
15. (Original) The method of claim 14 wherein:

Ser. No. 10/733,533

the forming of the seal occurs before the opening of the first valve.

16. (Original) The method of claim 12 wherein:

the opening of one of the first and second valves comprises a pivotal movement of a gate of said one valve; and

the opening of the other valve is manual.

17. (New) The method of claim 12 wherein:

the passing combustion gasses passes the combustion gasses through the second valve.

18. (New) The method of claim 17 wherein:

the second valve is between a main portion of the combustion conduit and said insertion portion.

19. (New) The method of claim 12 further comprising:

with the second valve open, introducing a fuel/oxidizer charge to the combustion conduit upstream of the second valve.

20. (New) The method of claim 19 wherein:

said fuel/oxidizer charge comprises a fuel and an oxidizer mixed at or subsequent to introduction to the combustion conduit.

21. (New) The method of claim 12 further comprising:

with the second valve open, initiating combustion of a fuel/oxidizer charge in the combustion conduit.

22. (New) The method of claim 12 further comprising:

causing a deflagration-to-detonation transition upstream of the second valve.

23. (New) The method of claim 12 wherein:

Ser. No. 10/733,533

the second valve is formed at an upstream end of the insertion portion and, after the insertion, one or more upstream conduit sections are installed to the insertion portion.

24. (New) The method of claim 23 wherein:

a sliding gate of the second valve is initially secured to a downstream body half of the second valve positioned to block the insertion portion during the insertion;

after the insertion, an upstream body half of the second valve is secured to the downstream body half; and

the gate is freed to allow said opening of the second valve.

25. (New) The method of claim 24 wherein the insertion is accomplished by tightening nuts on threaded rods extending from the downstream body half.